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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

HAUF-2

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on January 30, 2007

Signature

Typed or printed name HENRY M. FEIEREISEN

Application Number

10/719,615

Filed

11/21/2003

First Named Inventor

Ronald Hauf

Art Unit

2837

Examiner

McCloud, Renata D

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record. 31,084
Registration number

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34

Signature
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January 30, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ARGUMENTS ACCOMPANYING THE PRE-APPEAL BRIEF REQUEST FOR
REVIEW

ISSUE 1:

Appellant did not enter applicant's response under 37 C.F.R. 1.116, filed on
December 12, 2006

The refusal by the Examiner to enter applicant's response under 37 C.F.R. 1.116 is improper and appellant requests that the response be entered because it does not involve any amendments to the claims or specification, and no new issues have been raised. Appellant merely addressed the rejections of the claims.

ISSUE 2

Rejection of Claims 1, 5, 9, 10 under 35 U.S.C. §112, second paragraph, as being
indefinite.

CLEAR ERROR IN THE EXAMINER'S REJECTION: Incorrect Interpretation of Words.

1) The examiner rejected "in the event of" as lacking antecedent basis. In the English language, the term "in the event of" is an alternate expression for "if" and does not require antecedent basis. It does not refer to a specific event or to any particular claim element.

2) The phrase "so as to" does not render the claim indefinite. Again, the commonly accepted meaning of "so as to" in the English language expresses a consequence of an action. Claims 9 and 10 could alternatively have been drafted to read "thereby short-circuiting" instead of "so as to short-circuit."

"If the language of the claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement, a rejection of the claim under 35 U.S.C. 112, second paragraph, would be appropriate. See *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5

F.3d 1464, 1470, 28 USPQ2d 1190, 1195 (Fed. Cir. 1993). However, if the language used by applicant satisfies the statutory requirements of 35 U.S.C. 112, second paragraph, but the examiner merely wants the applicant to improve the clarity or precision of the language used, **the claim must not be rejected** under 35 U.S.C. 112, second paragraph, rather, the examiner should suggest improved language to the applicant." (MPEP 2173.02) [Emphasis added]

The rejection therefore contravenes the examiner's examination guidelines under MPEP 2173.02, and withdrawal of this rejection is requested.

For the reasons set forth above, it is respectfully requested to reverse the rejection of claim 1, 5, 9, 10 under 35 U.S.C. 112, 2nd paragraph.

ISSUE 3

Rejection of claims 1–10 rejected under 35 U.S.C. §103(a) as being unpatentable over Mori (US 5,333,706) in view of Yamada et al. (US 6,213,571) and further in view of Shin et al. (US 6,531,839).

CLEAR ERROR IN THE EXAMINER'S REJECTION: Failure to provide a *prima facie* case of obviousness.

Claim 1 is directed to a drive control system for braking an electric motor, with an integrated armature short-circuit brake having a first delay time, a mechanical brake having a second delay time which is longer than the first delay time, and a controller simultaneously applying a control signal to the integrated armature short-circuit brake and the mechanical brake at an activation time for immediately stopping the electric motor in the event of a malfunction which prevents a controlled slow-down of the electric motor. The armature short-circuit brake is disengaged when a thermal load limit for the electric motor or the controller has been reached.

Claim 5 recites a corresponding method for instantaneously stopping an electric motor powered by a drive system in the event of a malfunction which prevents a controlled slowdown of the electric motor. The method includes the steps of detecting the malfunction, simultaneously applying at an activation time a

control signal to an integrated armature short-circuit brake and a mechanical brake, and disengaging the armature short-circuit brake when the electric motor or its control electronics reach a thermal load limit.

The criteria for establishing a *prima facie* case of obviousness are detailed in MPEP 2142–2143. Pursuant to MPEP 2142, “To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).”

Mori discloses a brake apparatus for a vehicle, whereby for achieving a rapid braking action, the disk brake and the electromagnetic brake are activated simultaneously. (Col. 2, line 16–27 and col. 4, line 60–68). The examiner asserts that Mori disengages the electromagnetic brake when a certain load limit is reached, citing col. 5, lines 11–15: “In STEP 206, when the vehicle speed is equal to or lower than the threshold speed value, the control circuit 12 only outputs a power signal to caliper 16, and therefore only the disc brake (electric actuator 8) is actuated (STEP 209).” Evidently, Mori detects a low speed value and not a load limit.

The examiner furthermore asserts that the “thermal load limit” may be a minimum and not necessarily a maximum. However, the examiner's interpretation contravenes the commonly accepted meaning of the English term “load limit.” The term “load limit” is commonly used to express a maximum (and not a lesser load) that can be applied to a system or a component of the system. A definition can be found, for example, in the McGraw-Hill Dictionary of Scientific and Technical Terms, 5th edition, page 1158. A copy of this page has been submitted together with applicant's response under 37 C.F.R. 1.116 and the relevant passage is

duplicated here for the benefit of the Panel. The dictionary definition for “load limit” states as follows:

load limit [CIV ENG] the maximum weight that can be supported by a structure. [MECH ENG] The maximum recommended or permitted overall weight of container or a cargo-carrying vehicle that is determined by combining the weight of the empty container or vehicle with the weight of the load.

Mori’s failure to disclose “disengaging the armature short circuit brake when a (maximum) thermal load limit is reached” has been explicitly admitted in the office action (page 3, lines 7-8). In fact, Mori explicitly states (col. 4, lines 7-19) that “when the vehicle speed decreases below a predetermined value during brake operation, the control circuit 12, which receives a detection signal from the vehicle speed sensor 15, energizes caliper actuator 8 such that only the disc brake (or drum brake) is actuated to produce a brake operation.” (Emphasis added).

The Office Action then asserts that Yamada supplies the feature missing from the Mori reference by teaching “disengaging the short-circuit brake when a thermal load limit for the electric motor or the controller has been reached.” The examiner’s interpretation of the Yamada reference, however, is incorrect. Yamada discloses a control apparatus for an electric vehicle with an emphasis on achieving a smooth transition between regenerative braking and “plugging” braking. The term “plugging” braking, as it is known in the art, refers to an electric braking operation wherein an electric current is supplied to the motor/generator. Col. 1, lines 56-65, as cited by the examiner, refers to a method, which ensures operation of the control apparatus for electric vehicle to be maintained even if a contact voltage of the regenerative contactor cannot be detected due to failure of its wiring or the like. Yamada detects the absence of a contact voltage of the regenerative contactor during regenerative braking, but does not detect of a thermal load limit.

Shin is cited for disclosing delay times for mechanical and electrical braking. However, importantly, Shin describes first reducing the rotation speed of the motor by using a mechanical brake method, and then stopping the motor, when the rotation speed of the motor drops below a predetermined speed, by

using an electrical braking method. This is just the opposite of the claimed invention, which disengages the electromagnetic (short-circuit armature) brake (and not the mechanical brake!) when a thermal load limit is reached. Shin therefore also does not disclose a thermal load limit for a short-circuit brake.

The examiner further argues that Applicant applied the arguments against the references individually. This cannot be further from the truth, since at least the limitation recited in claims 1 and 5 that "the armature short-circuit brake is disengaged when a thermal load limit for the electric motor or the controller has been reached" (claim 1, similar language in claim 5) is absent from the combination of the references.

Applicant therefore submits that the cited references, taken either alone or in combination, fail to teach or suggest each and every limitation of the claimed invention and thus fail to satisfy the criteria for a *prima facie* case of obviousness pursuant to MPEP 2142.

Claims 1 and 5 are therefore patentable over the references of record. Claims 2-4, which depend from claim 1, and claims 6-10, which depend from claim 5, are then also patentable for at least the reasons that claims 1 and 5 are patentable.

For the reasons set forth above, it is respectfully requested to reverse the rejection of claims 1-10 under 35 U.S.C. 103(a).

Respectfully submitted,

By: 

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